



Visitor Experience and Resource Protection (VERP) Program 2004 Annual Report Merced River Monitoring

The *Merced River Monitoring 2004 Annual Report* summarizes the monitoring efforts and results from the first year of data gathering under Yosemite's user capacity management program. This process was originally called for in the 2000 *Merced Wild and Scenic River Comprehensive Management Plan* (Merced River Plan). The *2004 User Capacity Management Program for the Merced Wild and Scenic River* (hereafter referred to as the *User Capacity Management Plan*) further outlines procedures and processes available to park managers to protect resource condition and visitor experience along the Merced River corridor in Yosemite National Park. A significant part of this plan is the Visitor Experience and Resource Protection (VERP) process. The scope of the 2004 report is the monitoring efforts and results associated with the first year of VERP program implementation.

What is VERP?

The VERP framework is a tool developed by the National Park Service to address user capacities and ensure the protection of natural and cultural resources and the visitor experience. It looks at the notion of a "capacity" beyond simply counting the numbers of people. In Yosemite, the VERP program provides monitoring of the overall health of park resources, including the Outstandingly Remarkable Values of the Merced Wild and Scenic River. The program is based on the understanding that there are many aspects of visitor use that must be monitored and managed to keep the condition of resources (and visitor experience) in check. VERP considers the following when looking at patterns of visitor use: How many people are in a given area and what is their distribution? Where are people going and what kinds of activities are they engaging in? When are these activities taking place (season, month, hours of the day)?

To monitor the impacts of visitor use, VERP establishes specific indicators and sets a standard by which use can be measured. Indicators are specific, measurable quantities that reflect the overall condition of resources and/or visitor experience. Resource indicators measure visitor impacts on the biological, physical, and/or cultural resources of a park; social indicators measure visitor impacts on the park visitor experience. In order to protect the river's Outstandingly Remarkable Values, each indicator must have an established standard—or threshold—that when exceeded, requires park managers to take action to correct the problem.

The 2004 season was a year of brainstorming, development, refinement, implementation, reflection, and rethinking. The same should be anticipated for 2005. Several indicators that proved impractical or insensitive in the field will be set aside for 2005 and replaced with alternative indicators and standards. This iterative process assures that 1) monitoring provides meaningful and reliable results, and 2) monitoring results are directly related to values being protected. The annual report summarizes 2004 VERP monitoring results, identifies problem areas, proposes modified or alternative monitoring approaches, and makes management recommendations.

What findings are presented in the annual report?

Results of the 2004 monitoring effort, by indicator:

- **Campsite number and condition:** A sampling strategy was tested. Of 29 locations surveyed, 5 included campsites and one was in Condition Class 4 (classes 4 and 5 represent the worst conditions). Inadequate sample size indicated need for refinement of sampling methods. *Monitoring of this indicator will be suspended in favor of more sensitive indicators.*
- **Number of Encounters with other Parties:** A sampling strategy was tested. The short field season and resulting small sample size limit data validity. The average level of encounters was less than one party per hour. A larger sample size is indicated for 2005.
- **People at One Time at Selected Sites:** The indicator as measured did not exceed the standard for number of people at one time. The maximum recorded number of people at one time was eighteen, compared to a standard of twenty.
- **Exposed Tree Roots in Wilderness Campgrounds:** The indicator as measured did not exceed the standard of no more than 10% of the trees with moderate or severe level of exposed tree roots. *Monitoring of this indicator will be suspended in favor of more sensitive indicators.*
- **Number of Social Trails:** Data collected in 2004 is regarded as baseline data and, as such, sets part of the standard for this indicator. Field staff identified 10 social trails originating near wetland features, an apparent violation of the “no trails in wetland features” portion of the standard for this indicator. These trails will be investigated in 2005 and, if appropriate, management action will be taken.
- **Length of Social Trails in Meadows:** Data collected in 2004 is regarded as baseline data and, as such, will be used to establish the standard for this indicator. Staff recorded location and condition of all social trails in eight meadows in Yosemite Valley. High densities of social trails in El Capitan and Bridalveil Meadows will be investigated for potential restoration.
- **River Bank Erosion that is Accelerated or Caused by Visitor Use:** The protocol for this indicator required first identifying high-use zones and then sampling from those zones. To avoid biases in data collection, no sampling and assessment occurred this year, only identification of the high use zones. *This protocol is being modified to better meet resource management and ecological restoration needs.*
- **Exposed Tree Roots in Developed Campgrounds:** The indicator as measured showed that more than 95% of the campsites meet the “slight or none” root exposure criteria. *Monitoring of this indicator will be suspended in favor of more sensitive indicators.*
- **Water Quality:** Data collected from 2004 to 2007 will set the standard for water quality. Monitoring indicated decreasing concentrations of nitrate and fecal coliform and increasing phosphorous concentrations as water levels declined and water temperatures increased during the summer. Nutrient concentrations were all very low with respect to state drinking water standards.

What recommendations were made for 2005?

Field staff recommended refinements for all monitoring protocols and, in some cases, the wording for the standards themselves. Monitoring results should be used to assess the real utility of the indicators and standards at helping manage and protect the Outstandingly Remarkable Values of the Merced Wild and Scenic River Corridor. In some cases there is a direct connection; in others the connection is less obvious. As such, opportunities remain to revise standards or adopt new ones that are better.

Stay involved.

A key part of the VERP program's success is keeping the public apprised of progress. As the 2005 season begins, the National Park Service will present quarterly updates, as either a newsletter or public meeting. Sign up for the park's electronic newsletter at www.nps.gov/yose/home.htm, or check out the latest updates online at www.nps.gov/yose/planning.